



Amstrad PCW9512

The PCW9512 is Amstrad's latest tool with which to crack the business computing market, and, with its unfussy styling and greatly improved printing capabilities, the machine looks assured of success.

John Donaldson determines its credibility.



'You are the marketing director of a large consumer electronics company which has recently experienced hyper-growth driven by two innovative computer products. Growth is now slowing and sales of one of the products are declining. What do you do?'

This sounds like a question from an exam paper for the Institute of Marketing. In an attempt to answer it, managers weaned on an academic approach to marketing would immediately reach for graph paper on which to draw product life cycle graphs, and strange matrices with names like 'cash cow', 'star' and 'dog'. Marketeers brought up the hard way, however, would be more likely to reach for a notepad to devise ways of gaining a few more miles out of the products.

One of the most popular ways of implementing the latter method is to add 'perceived value' to the product, to allow you to sell it to new markets and/or charge more money for it. The art here is to achieve the maximum increase in perceived value at the lowest cost to yourself.

Amstrad has always prided itself on being a 'school of life' company, so the arrival of the PCW9512 doesn't come as much of a surprise. The original PCW8256 was an enormous success and the PCW8512 built on that success, but interest has waned recently so a revamp was called for.

Two of the main criticisms of the 8256 which filtered back to Brentwood were the low quality of the printer and the machine's non-businesslike styling, so why not enclose it in some new, flashy casings, throw in a daisywheel printer and charge an extra £100 for the result. Sounds good to me...

Hardware

It's fair to say that the 8256 looked more like a portable TV than a serious office computer. Amstrad obviously took this criticism to heart, because the new machine looks much more like a traditional business computer system.

At first sight the 9512 looks like it has the standard configuration of separate system, monitor and keyboard units. However, closer inspection reveals that the system box and monitor have been cast as one unit. Although this arrangement is tidy and obviously saves Amstrad money, it does mean that it isn't possible to tilt or swivel the monitor to suit individual requirements.

In addition to housing the display, the main system unit also contains the power supply, disk drive and computer circuitry. The front panel houses a single 720k 3in disk drive; a second drive is available as an optional extra and would fit in the space to the right of the existing

drive. Underneath the disk drive, on the front panel, is a four-way DIN socket for the keyboard.

The rear of the machine houses the on/off switch, and controls for the horizontal and vertical hold on the monitor. Below these are a system expansion edge connector, a 25-way IBM-style parallel printer port, and a massive DIN socket for the Amstrad printer.

The expansion connector is exactly the same as the one on existing PCW machines and can accept add-ons designed for the older units. I tried to plug the AMX mouse into the expansion slot and it worked fine.

The provision of a parallel printer port is a sensible addition to the 9512, as previously it was only available as an optional extra. The machine still doesn't have an RS232 port, but these can be bought as add-ons.

Inside, the heart of the 9512 is little changed from earlier machines. It still uses the Zilog Z80 8-bit processor, has the same 512k of RAM as the 8512 and has no ROM (the bootstrap loader is masked onto one of the custom controller chips).

Performance is hardly spectacular by today's standards, but then it doesn't have to be. Word processing is one of the easier tasks faced by a computer, so you don't need great chunks of processor power to make a good system.

The keyboard on the 9512 is totally different from previous PCW machines. For this, Amstrad has my heartfelt thanks because the old unit was the nastiest keyboard I have ever used.

The new keyboard is, in general, a vast improvement. It has 82 keys arranged in three groups. The main group is the qwerty typing section. To the left of this is a bank of ten keys, of which four are function keys and the rest are Locoscript control keys. To the right of the qwerty typing section are the editing keys; these comprise the cursor control keys and a range of dedicated Locoscript editing keys. This section doubles as a numeric keypad.

The old PCW keyboard was very cramped, but this is certainly not the case with the new unit. The keys are nicely spaced and the different groups of keys are well spread out.

To add to the luxury, Amstrad has included a palm rest at the front of the unit.

In common with the older PCW keyboards, the 9512's unit includes keys for some unusual characters, and fractions such as a quarter, a half and three quarters are provided as standard. By using the 'Extra' key, you can access a range of foreign and scientific characters.

However, there are still a couple of points that annoy me. Firstly, the keyboard comes with a 'Shift Lock' key rather than the more common 'Caps Lock'. When Shift Lock is selected, '!' appears instead of '1', '' instead of '2', '£' instead of '3', and so on. People familiar with typewriters will be used to this, but computer users will find it strange at first.

The second criticism of the keyboard is that the 'Exit' key is right next to the space bar and could be hit accidentally.

Apart from being housed in a new casing, the display of the 9512 differs from the 8256 in that it now uses a paper-white display instead of the old green screen.

Paper-white screens are very trendy these days, but they can suffer from flicker. To avoid this, the 9512 displays its letters as white on black instead of the more usual black on white, but the problem has not been alleviated completely. The new white display is still much better than the old green screens, however, and bears some resemblance to the monochrome display on Amstrad's PC clone.

One interesting aspect of the 9512's display which is shared with the older PCW machines is its ability to display up to 35 lines of 90 characters — most computer screens are limited to 25x80. This extra size can be useful in wide Locoscript documents where you can see all of the document onscreen at once.

One of the major failings of the old PCW machines was the poor quality of the print produced by the dot matrix printer which was supplied with them. Amstrad has rectified this problem by supplying a daisywheel printer with the PCW9512. The great advantage of daisywheel printers is that they offer good print quality; their disadvantages are that they are slow and lack the graphics abilities of

Technical specifications

Processor:	Zilog Z80, 4MHz
RAM:	512k
ROM:	None
Mass storage:	Single 720k 3in floppy disk drive
Optional:	Second drive
Display:	White on black, 90 columns by 35 lines
I/O:	Parallel printer port, Amstrad printer port
Expansion slots:	One edge connector
Keyboard:	82-key with dedicated Locoscript keys
Operating system:	CP/M Plus
Bundled hardware:	20cps daisywheel printer
Bundled software:	Locoscript, Mallard Basic, DR Logo

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dot matrix printers.

The Amstrad printer looks impressive. It has a 15in carriage which allows it to accept a wide range of paper sizes. It uses Diablo 630 daisy-wheels which means that obtaining new character styles and replacement wheels should not be a problem. But it also has some unusual features.

Close inspection reveals that the printer's casing holds very little apart from the print mechanism and the platen roller. In addition to the bits that actually do the printing, most printers have power supplies, control circuitry, and so on, which take up space.

The Amstrad printer has none of this. The power is supplied down the printer cable from the main unit, and most of the control electronics are handled by the main unit, too. This spartan approach has enabled Amstrad to sell its machines at relatively low cost.

In use, the printer is pretty impressive. It is rated at 20 characters per second, which isn't particularly fast, but it gets the job done adequately enough. The print quality is very good and is a great improvement over the old dot matrix units.

My main criticism of the printer is the horrible noise it makes — and you don't have to look far to find the reason. All printers make noise, so most manufacturers fit sound-deadening foam inside the casings to try to reduce the volume. The Amstrad printer has no foam at all. Such is the price to pay for a low-cost machine! The noise factor is somewhat lessened when the lid is down, but if you do this with cut-sheet paper it makes feeding in the paper difficult. With continuous tractor-fed paper, it is impossible to have the lid down because the tractor feed gets in the way.

Software

Locoscript 2

The PCW9512 is supplied with two disks: the first contains the Locoscript word processing software; and the second contains the CP/M operating system and some utilities. Locoscript has been the standard word-processing software on all the PCW machines since they were launched. It has now progressed to Locoscript version 2 which features a number of modifications and enhancements.

When you first switch on the machine and put the Locoscript disk in the drive, it seems to take an age before the system loads. This is because, in addition to the Locoscript word processing software, the PCW9512 is also supplied with the Locospell and Locomail add-ons. The extra time is taken in copying the

spelling checker's dictionary into the RAM disk.

When Locoscript is booted, you are greeted by the intimidating sight of the 'Disk Management' menu; this is where you store and maintain all the documents you have created. The Disk Management menu allows you to group different sets of documents together by type, allowing you to create standardised document 'templates' which can be used with different types of documents. The use of templates isn't mandatory, but can be useful in cutting out repetitive work.

Assuming that you want to create a new document, you press 'C' and the system prompts you for a filename. When you have provided this information, you are faced with the editing screen.

At this point, I must admit that Locoscript has never been my favourite word processor because it insists on doing things strangely. A good example of this idiosyncratic behaviour is that commands are always issued by pressing the 'Enter' key, rather than the 'Return' key which all other word processors use. If you are new to word processors this isn't a problem, but if you are

experienced with other packages, this kind of thing will drive you mad.

Locoscript suffers from an uneasy combination of pull-down menus and dedicated keys which are used to control the word processor. You can often find yourself in the situation where you know what you want to do, but you can't remember if the command is hidden in a pull-down menu or if you should hit a key on the keyboard.

One of the early criticisms levelled at Locoscript was its lack of facilities. However, a combination of updated software and the inclusion of the Locospell and Locomail utilities means that the system now has a good range of general-purpose facilities available.

The spelling checker has a 78,000-word dictionary and an optional user dictionary for any unusual words. Because Locospell automatically copies the dictionary to the RAM disk, the spelling checker is quite fast, but the system isn't very intelligent when it comes to suggesting corrections for misspelled words. It seems to work purely on an alphabetical basis and, consequently, often makes hopelessly incorrect suggestions.

Locoscript is quite proficient at



The 9512's uncluttered keyboard features some unusual characters

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driving the daisywheel printer. It can produce all the usual print styles such as underline, bold, strikeout, and so on, and can vary the pitch of the characters. It can also print out the unusual characters which are available on the printwheel, such as fractions.

One thing you can't do, however, is instruct the printer to pause while you change the printwheel. This could be necessary, for example, if you wanted to change to italics in the middle of a document and then change back again. Most popular word processors allow you to embed a code in the text which will stop printing in the right place to allow you to change the wheel. This is a strange omission from Locoscript, considering the otherwise solid daisywheel support.

CP/M Plus

In addition to Locoscript, all PCW machines are supplied with the CP/M Plus operating system; this allows the machine to run a wide range of 8-bit applications software. And, because CP/M on the Amstrad has proved so popular, there is no shortage of software to choose from.

The implementation of CP/M Plus on the 9512 is very similar to that of other Amstrad machines. Of the 512k of RAM available, 368k is assigned to a RAM disk which is referred to as drive M, and 61k is available as the Transient Program Area for applications programs.

Amstrad has always provided thoughtful CP/M utilities for its machines, and the 9512 is no exception. The programming languages, Mallard Basic and DR Logo, are supplied as standard, and a wide range of utilities are provided to handle the screen printer and disk drives. Details on all the utilities can be accessed via a 'Help' program.

Perhaps the two most useful utilities are 'Daisy' and 'Matrix'. As their names imply, Daisy makes the printer emulate a Diablo 630 daisywheel printer, and Matrix makes it emulate an Epson FX80 dot matrix printer.

As the 9512's printer has no control circuitry, these programs also allow you to alter the default settings which would normally be set using



The printer's impressive appearance hides a spartan internal design

DIP switches on the printer. These settings include: paper length, top and bottom margins, and whether the paper-out detector is switched on. You can have hours of fun with these utilities.

Although the provision of Diablo 630 emulation for the printer is a good idea, the option of making the daisywheel printer pretend to be an Epson dot matrix unit may seem rather odd. The main reason for the existence of this emulation is to retain compatibility with software written for earlier PCW machines and their dot matrix printers. In use, the matrix driver worked very well. The only thing I didn't try was doing a graphics dump to the daisywheel!

Overall, the 9512 has a good, solid

implementation of CP/M Plus. It ran all the old PCW software I tried, including the AMX desktop software which required an add-on box to drive the mouse.

Documentation

As is often the case with these red-hot PCW exclusives, no documentation was available at review time.

Conclusion

Producing a successor to a successful product is a hard task indeed — just look at what happened to Apple when it tried to follow up its original PC. Amstrad has taken a sensible approach. It has looked closely at its existing product, and has updated it to the point where it can be marketed virtually as a new product.

In general, Amstrad has done an excellent job of updating the existing PCW standard: the 9512 is better in every department — the styling, the screen, the printer and the keyboard. I still don't like the Locoscript software but even that has improved, and you can always buy alternatives such as Protext and WordStar. At £499, the price is also higher, but I would definitely pay the extra.

Amstrad is on (0277) 228888.

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In perspective

By all accounts, one of Amstrad's prime motives for developing the new, improved PCW9512 was to try to capture a slice of the American word processor market. Although the PCW8256 was good, it was never perceived as being a viable business product because of its styling and its limited printing abilities. The new machine addresses all these areas and is a much more credible business proposition than the PCW8512.

In terms of market positioning, the 9512 will sit above the 8512 which will continue in production. Amstrad has adjusted the pricing of these machines so as to retain pricing differentials. However, the difference in price in real terms is not that great and the 9512 is a much better machine, so it will be interesting to see how long the existing PCW machines survive.

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